A compound that has the general structural formula 1 is expected to exist as a pair of enantiomers.

\[
\begin{align*}
\text{X} & \quad \text{A} \quad \text{Z} \\
\text{Y} & \\
\text{1}
\end{align*}
\]

\[
\begin{align*}
\text{X} & \quad \text{A} \quad \text{Z} \\
\text{Y} & \\
\text{enantiomers}
\end{align*}
\]

For example, ethylmethylamine (2a) is expected to exist as a pair of enantiomers.

\[
\begin{align*}
\text{H} & \quad \text{N} \quad \text{CH}_3 \\
\text{CH}_2\text{CH}_3 & \\
\text{2a} & \\
\text{CH}_3\text{CH}_2 & \quad \text{N} \quad \text{H} \\
\text{2b} & \\
\text{enantiomers}
\end{align*}
\]

2a and 2b, however, have no independent existence because they rapidly interconvert. The process by which 2a and 2b interconvert is called pyramidal inversion.

Contributors

- Gamini Gunawardena from the OChemPal site (Utah Valley University)